

What is claimed:

1. A process for enhanced secretion of a polypeptide in bacteria, comprising:
 - 5 (a) culturing bacterial cells that contain a recombinant expression vector comprising a first DNA sequence encoding a polypeptide that can be secreted by the bacteria and a second DNA sequence encoding a charged, amino-acid tag covalently bonded at the carboxy-terminus of said polypeptide, such that the polypeptide is produced by the cells; and
 - 10 (b) optionally, recovering the polypeptide from the culture medium.
2. The process of claim 1, wherein said tag comprises one or more charged amino acid residues.
- 15 3. The process of claim 2, wherein said tag comprises at least two negatively charged amino acid residues or at least two positively charged amino acid residues.
4. The process of claim 3, wherein said tag comprises two negatively
20 charged amino acid residues, selected from the group consisting of D and E.
5. The process of claim 4, wherein said tag comprises two D residues.
6. The process of claim 3, wherein said tag comprises two positively charged
25 amino acid residues, selected from the group consisting of K and N.
7. The process of claim 6, wherein said tag comprises two K residues.
8. The process of claim 1, wherein said bacteria is a *Bacillus* species.
- 30 9. The process of claim 8, wherein said bacteria is *B. subtilis*.

10. The process of claim 1, wherein said expression vector further includes a DNA sequence encoding a signal peptide operatively linked to said first DNA sequence.

5 11. The process of claim 10, wherein said signal peptide is *B. licheniformis* α -amylase (AmyL) signal peptide.

12. The process of claim 1, wherein said polypeptide is a heterologous protein selected from the group consisting of hormones, enzymes, and growth
10 factors.

13. The process of claim 12, wherein said protein is human interleukin.

14. A method for enhancing the secretion of a heterologous polypeptide in a
15 *Bacillus* species, comprising: substituting one or more of the C-terminal amino acids residues of said polypeptide with at least one charged amino acid residue, or adding one or more charged amino acid residues to the C-terminus of said polypeptide.

20 15. The method of claim 14, wherein the last two amino acid residues of said polypeptide are substituted with a D.

16. The method of claim 14, wherein the last two amino acid residues of said polypeptide are substituted with a E.

25 17. The method of claim 14, wherein the last two amino acid residues of said polypeptide are substituted with a K.

18. The method of claim 14, wherein the last two amino acid residues of said
30 polypeptide are substituted with a N.

19. The method of claim 14, wherein two D residues are added at the C-terminus of said polypeptide.

20. The method of claim 14, wherein two E residues are added at the C-terminus of said polypeptide.

21. The method of claim 14, wherein two K residues are added at the C-terminus of said polypeptide.

22. The method of claim 14, wherein two N residues are added at the C-terminus of said polypeptide.

23. A method of reducing the susceptibility of a polypeptide to an extracellular protease of a microorganism, said method comprising substituting one or more of the C-terminal amino acids residues of said polypeptide with at least one charged amino acid residue, or adding one or more charged amino acid residues to the C-terminus of said polypeptide.

24. An expression cassette comprising a first DNA sequence encoding a protein of interest and a second DNA sequence encoding a tag, wherein the tag is covalently attached to the C-termini of the protein of interest when transcribed.

25. The expression cassette of claim 24 further comprising a third DNA sequence encoding a signal sequence.

26. The expression cassette of claim 25 wherein the signal sequence is for the sec-dependent secretory pathway.